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## PCW\_\_09\_\_22 Coordinate transformations v7

### Question 1

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f[3x + 7]}{8} - 4$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 2

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = 5 \cdot (f[6(x - 4)] - 3)$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 3

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f[8x - 5]}{3} + 4$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

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### Question 4

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f\left[\frac{x}{9} - 2\right] - 4}{5}$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 5

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = 5 \cdot f\left[\frac{x - 2}{7}\right] + 4$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 6

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f\left[\frac{x+2}{6}\right] + 8}{9}$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.